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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,194	10/10/2001	Shimichi Takasugi	S004-4420	8801

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EXAMINER

NGUYEN, HA T

ART UNIT PAPER NUMBER

2812

DATE MAILED: 01/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/975,194

Applicant(s)

TAKASUGI ET AL.

Examiner

Ha T. Nguyen

Art Unit

2812

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 12-20, 31 and 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 21-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 2812

DETAILED ACTION

1. Applicant's election of Group I, claims 1-11 and 21-30 in Paper No. 5 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 112

2. Claims 4-11 and 25-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the limitation "said positive electrode, said negative electrode, said non-aqueous solvent, an electrolyte, said separator, and said gasket;" in lines 5-7, claim 25 recites "the resulting product", "the plane", "the coated product" in lines 7, 9, and 10, respectively. There is insufficient antecedent basis for these limitations in the claims. Claims 6-11 recite $\pm 50\%$, $\pm 20\%$, or $\pm 10\%$ in their respective last lines, it is not clear upon what reference these percentages are determined.

Claims 5-11 and 26-30 variously depend from claim 4 or 25, they are rejected for the same reason.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor

Art Unit: 2812

and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103[©] and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka (U.S. Patent 5361685) in view of Kurz et al. (U.S. Patent 6130311, hereinafter "Kurz").

[Claim 1] Referring to Figs. and related text, Tanaka discloses a method of producing a device comprising a positive electrode, a negative electrode, a non-aqueous solvent, an electrolyte containing a supporting salt, a separator, and a gasket (see Summary and col. 9, line 4-col. 10, line 25), said method comprises: a step of assembling by caulk sealing inside a device said positive electrode, said negative electrode, said non-aqueous solvent, said electrolyte, said separator, and said gasket (see example 1). But it does not disclose expressly forming double layer capacitor and a heating step. However, the missing limitations are well known in the art because Kurz discloses a heating step in the fabrication of capacitor (See col. 1, line 23 and Comparative example 4). Besides batteries and capacitors have similar characteristics, their methods of formation are also similar. A person of ordinary skill is motivated to modify Tanaka with Kurz to obtain capacitor capable of withstanding reflow temperature.

[Claim 2] The combined teaching of Tanaka and Kurz does not disclose wherein the method comprises welding an outer connection terminal to said capacitor after heating. However, it is a common practice in the art to weld the capacitor to external terminals allowing connection of the capacitor with the controlling circuitry of an instrument.

[Claim 3] Kurz also discloses wherein the heating temperature is in a range of from 180 to 300C (see col. 33-40).

Therefore, it would have been obvious to combine Tanaka with Kurz to obtain the invention as specified in claims 1-3.

5. Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka.

[Claim 21] Tanaka method of producing a sealing material for an electric device, which comprises mixing asphalt with a rubber based adhesive in an organic solvent discloses (See Summary, col. 7, line 39-col. 8, line 15).

Art Unit: 2812

But it does not disclose expressly the sealant is used for a double layer capacitor .

However, it is well known in the art that batteries and capacitors have similar characteristics, the materials used for their formation are also similar.

[Claim 22] Tanaka also discloses wherein said rubber base adhesive is based on butyl rubber (See col. 5, lines 24-52);

[Claim 23] wherein the method comprises heating after mixing (See par. bridging cols. 7 and 8); and

[Claim 24] wherein said organic solvent is toluene (See Examples 1-4).

Therefore, it would have been obvious to use Tanaka's teaching to obtain the invention as specified in claims 21-24.

6. Claims 4-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al. (U.S. Patent 6247277, hereinafter "'") in view of Kurz.

[Claims 1 and 4] Referring to Fig. 1 and related text, Mori discloses a mounting method comprises: a step of assembling by caulk inside an inner device a positive electrode, a negative electrode, a non-aqueous solvent, an electrolyte, a separator, and a gasket; a heating step and a step of arranging and reflow soldering said electric device on said circuit substrate (See col. 10, line 31-col. 14, line10). But it does not disclose expressly the formation of a double layer capacitor and the heating step. However, the missing limitations are well known in the art because Kurz discloses the heating step as shown above.

[Claims 2 and 5] Mori also discloses wherein the method comprises welding an outer connection terminal to said device after said assembling step (see par. bridging cols. 1 and 2).

[Claim 3] Kurz also discloses wherein the heating temperature is in a range of from 180 to 300C (see col. 33-40).

[Claims 6-11] The combined teaching of Mori and Kurz does not disclose that the difference in temperature profiles with respect to time or the difference in time duration between the heating step and the reflow soldering step fall within $\pm 50\%$, $\pm 20\%$, $\pm 10\%$, at different temperature ranges. However, it would have been logical to do so to obtain capacitors capable of withstanding the reflow temperature without excessive heating resulting in low yield. At the

Art Unit: 2812

higher temperature where damage can occur more easily, tighter control is necessary while at lower temperature more relaxed controlled, resulting in lower cost, can be tolerated .

Therefore, it would have been obvious to combine Mori with Kurz to obtain the invention as specified in claims 4-11 .

7. Claims 1, 3, 25, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al..

[Claims 1, 3, and 25] method of producing an electric device comprising: a step of assembling by caulk sealing inside an electric device a positive electrode, a negative electrode, a non-aqueous solvent, an electrolyte, a separator, and a gasket, comprising dissolving a rubber based adhesive and an asphalt in an organic solvent, applying the resulting product to the inner plane of a positive electrode canister and the plane in contact with the negative electrode of the gasket; and a heating step (see examples 1-6 and col. 8, lines 53-64). But it does not disclose expressly drying the coated product and [Claim 30] forming a mark of finishing heating on the surface of the device on finishing heating. However it would have been obvious for a person of ordinary skill in the art to dry the applied material to stabilize the material on the canister and to mark the capacitor after heating to distinguish the finished capacitor from the capacitor which still need to be thermally treated.

Therefore, it would have been obvious to combine with to obtain the invention as specified in claims 1, 3, 25, and 30.

8. Claims 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Tanake.

Watanabe discloses substantially the limitations of claims 26-29, as shown above. But it does not disclose [Claim 26] wherein said asphalt is straight asphalt; [Claim 27] wherein said drying is performed at a temperature not higher than the melting point of the gasket that is used a temperature of 80C or higher; [Claim 28] wherein said asphalt is blown asphalt; and [Claim 29] wherein said drying is performed at a temperature not higher than the melting point of the gasket that is used a temperature of 100C or higher.

Art Unit: 2812

However, the missing limitations are well known in the art because Tanaka discloses the use of straight and blown asphalt (See par. bridging cols. 6 and 7). The combined teaching does not disclose the drying temperature. However it would have been obvious to a person of ordinary skill in the art to use appropriate temperature to perform the drying without damaging the gasket.

A person of ordinary skill is motivated to modify Watanabe with Tanaka to obtain conventional material with known, well tested characteristics.

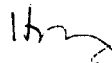
Therefore, it would have been obvious to combine Watanabe with Tanaka to obtain the invention as specified in claims 26-29.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ha Nguyen whose telephone number is (703)308-2706 . The examiner can normally be reached on Monday-Friday from 8:30AM to 6:00PM, except the first Friday of each bi-week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling, can be reached on (703) 308-3325. The fax phone number for this Group is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.



Ha Nguyen

Primary Examiner

12 - 27 - 02